

An
Inaugural Essay,
on
Hæmoptysis.
Submitted to the Examination,
of the
Trustees and Medical Professors
of the
University of Pennsylvania;
for the
Degree of Doctor of Medicine,
by
William Davis
of Pennsylvania.

Examination postponed March 15th 1823

Paperd March 27th 1823

Hæmoptysis

When we reflect on the size of the blood vessels entering the lungs, and on their minute ramifications being delicately dispersed on the surface of the alveoli and involved in a cellular substance that will admit of but little resistance, the frequency of hæmorrhage from that viscous can not be wondered at.

When after some affection of the chest, blood is brought up by coughing, there can be but little doubt that it proceeds from the lungs, there are however cases to be mentioned hereafter, in which it will be necessary to take other circumstances into view, to enable us to determine whether it proceeds from the fauces,

Chlorophanes.

the adjoining cavity of the nose, the stomach,
or the lungs.

Hæmoptysis most usually arises
between the ages of sixteen and twenty five
years, and may be occasioned by a variety
of causes, such as any violent exertion either
in running, jumping, wrestling, singing,
speaking loud, or blowing wind instruments,
as likewise by wounds, plethora, scorbutic vessels,
 hectic fever, cough, irregular living, excessive
drinking, or the suppression of some accustomed
discharge, such as the menstrual or haemorrhoidal.
It may likewise be occasioned by
breathing air which is too much rarefied to be
able properly to expand the lungs.

Persons labouring under defective conforma-
-tion either in the vessels of the lungs, or in
the capacity of the chest, being distinguished
by a narrow thorax and prominent
shoulders, or who are of a delicate make and
sanguine temperament, likewise those possessed
of great sensibility and irritability and who
have had previous affections of the same

disease, even much predisposed to this
hemorrhage, but in these the complaint
is often brought on by the concurrence of the
various occasional and exciting causes before
mentioned. A spitting of blood is not however
always to be considered as a primary disease.
It is often only a symptom and in some
diseases, such as pleuritis, peripneumonias
and many fevers, often arises and is the
presage of a favourable termination.

Symptoms.

In this disease, as in many others, we
find two states termed by Dr. Hullen the active,
and passive. Its first stage is usually ushered
in by coldness of the extremities, pain in the back
and loins, flatulency, costiveness and lassitude;
a redness of the face particularly the cheeks
accompanied by a pain and sometimes a
burning sensation in the breast, difficulty of
breathing, and frequently, a saltish taste is
perceived in the mouth. After these symptoms

1844

Journal

Jan 1st. A fine day. The wind is from the north-east. The temperature is 40°. The sun is shining. The clouds are light. The water is calm. The birds are singing. The flowers are beginning to bloom. The leaves are green. The grass is growing. The trees are full of fruit. The people are happy. The world is full of life.

Jan 2nd. A fine day. The wind is from the north-east. The temperature is 40°. The sun is shining. The clouds are light. The water is calm. The birds are singing. The flowers are beginning to bloom. The leaves are green. The grass is growing. The trees are full of fruit. The people are happy. The world is full of life.

have continued for a longer, or a shorter time
a tickling sensation is experienced in the
trachea, attended with a tussiculus or a
slight hacking cough followed by a dis-
=charge of blood of a florid and frothy
appearance producing a noise similar to
air passing through a fluid. The blood
brought up in this manner is generally at
first in small, but in some cases from the
very commencement it appears in large
quantities, and not preceded by the pre-
=monitory symptoms appearing suddenly
and returning at stated periods. The pulse
in this state of the disease is frequently
quick, and tense, sometimes full and round
without tension.

If the disease has continued for any
length of time, or the discharge profuses
the symptoms of the second or passive state,
make their appearance, the pulse becomes
small and frequent, the difficulty of breathing
continues to an alarming degree, the face pale,
the extremities cold, syncope, tremors, convulsions

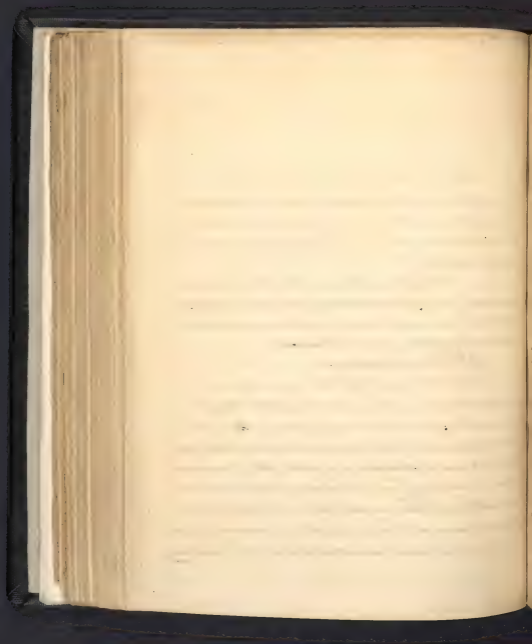
and lastly death.

Diagnosis.

When blood is thrown out from the mouth, it is not always easy to determine from what internal part it proceeds. It however may be done by attending to the following considerations. When blood proceeds from the fauces or posterior nares it is for the most part, brought up by haemorrhoids and by inspection we trace it often in our power, to detect the bleeding vessels.

Hæmorrhages from the fauces are a more rare occurrence than those from the lungs, and are seldom attended with fever.

When they proceed from the stomach, they may be known by the absence of the symptoms mentioned above, and being attended with pain, anxiety and a sense of weight, referable to that viscus; from the dark and mucous appearance of the discharge, from its being mixed with alimentary matter, and by its

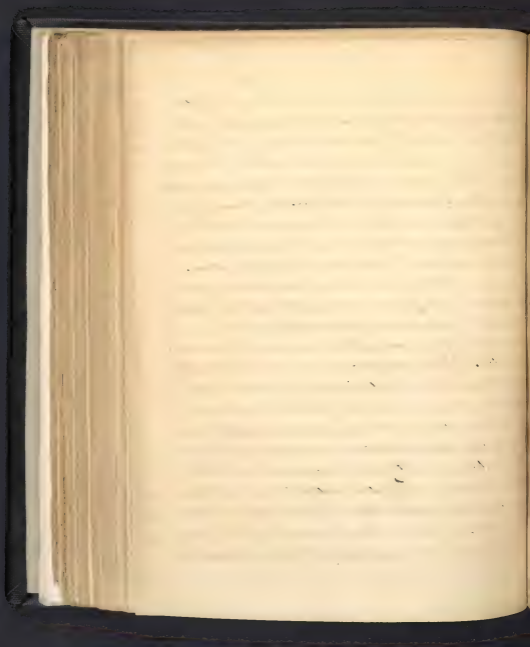


being unattended by cough, and usually
in larger quantities.

Prognosis.

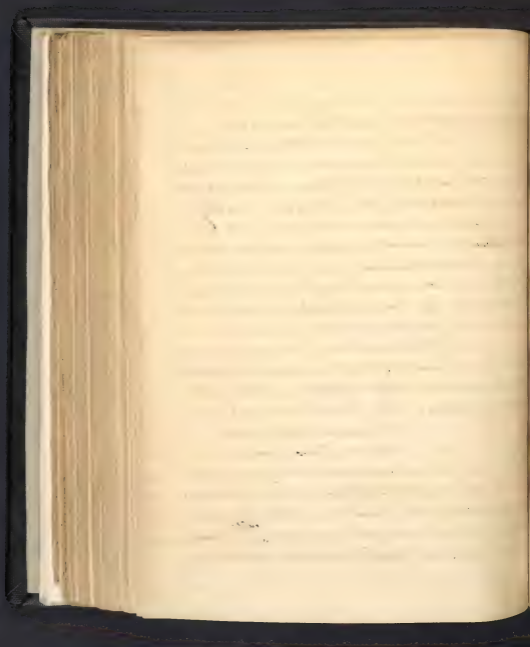
Favourable, when it arises
from external violence, more so when
it occurs in consequence of some su-
perfluous evacuation as the menses in
women and the haemorrhoids in men,
and when the blood is small in quan-
tity, and of a bright red colour and not
followed by cough, dyspnoea, pain,
or other affections of the lungs. It is
thought salutary, when it occurs as
a symptom of a prevailing epidemic,
as plague, yellow fever, small pox &c.
thereby proving a solution of the disease.

Unfavourable, when it arises
from hereditary predisposition, or
malconformation of the pulmonary
system.



though it must in general be large, and in some cases its effects appropriating to syncope, which however will not be often necessary, since we are plentifully furnished with agents sufficiently active to suppress it, without carrying venesection to so great an extent: nevertheless there should be taken away at once by a large orifice as much as will subdue arterial action.

Kibe, from its refrigerating and sedative effects, is eminently suited to the cure of hemorrhages, it should be prescribed in small doses and frequently repeated. This medicine is found especially useful in Hemoptysis, and it is of more service than muriate of Soda (or common salt) from the latter, in many instances being too stimulating and always leaving the patient liable to a recurrence of the complaint. But the latter is sometimes used with advantage, for I agree with Dr. Rush that a large dose of it will very effectually stop a copious bleeding from the



lungs, and it is always at hand where
other remedies can not be procured.

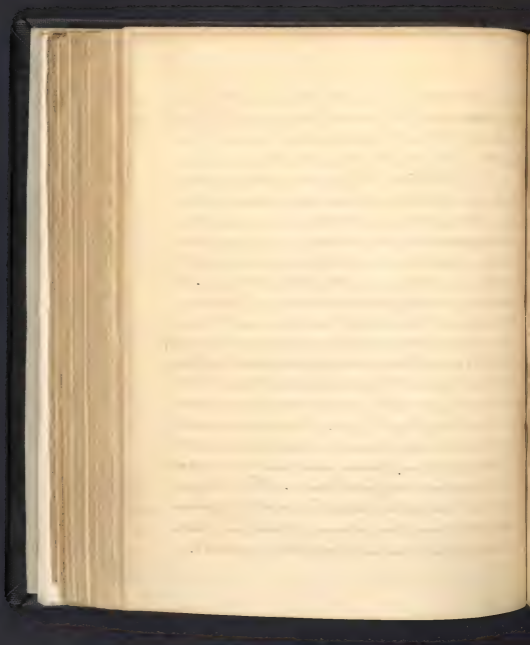
Saccharum Saturni. This medi-
-cine has long been used in hæmorrhages;
but the cautions of Sir George Baker, and
others, concerning its deleterious quality,
brought it into disuse. To the late Dr.
Barton the credit is due, of dissipating
those false alarms, and reviving the use
of this remedy, which is of almost unequal-
-led value in hæmorrhages, both of the
active and passive kind.

Dr. Reynolds of London used it
with great success in the case of a young
gentleman in hæmoptysis in the fol-
-lowing form. *R* Sacch: Sat: gr i

Conserv: Ros: ʒss ii

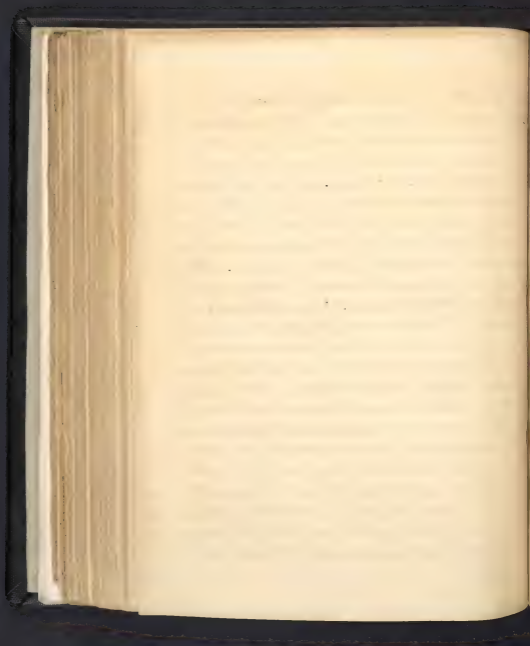
Sinct: Thebæ gr iiii

The dose was increased in two days to
double the quantity. Before taking the above
prescription, he had been bled several
times, nitre and other neutral ^{salts} had been
administered freely, and an absterious



died observed. His pulse 108 in a minute,
in four days His pulse became soft, l's full
and beat 90 in a minute; his hemorrhage
ceased on the fourth day after taking the pills.

Professor Chapman, whose practice
with this article has been very extensive, and
to whom we are indebted for many useful
and important observations on its properties,
recommends it as a valuable and powerful
remedy in uterine and other hemorrhages. The
largest quantity that he gave was half a
drachm in the twenty four hours. He ob-
serves, that it will, however be found, in general,
that two or three grains given three or four
times a day will be amply sufficient; for
it is rarely necessary to transcend nine or ten
in the twenty four hours. It should never be
continued longer than three or four days at
a time, as by a longer continuance of its use,
bad consequences might ensue. He always
combined it with a small quantity of opium,
and supposes that it may be given in larger
doses with, than without this narcotic.



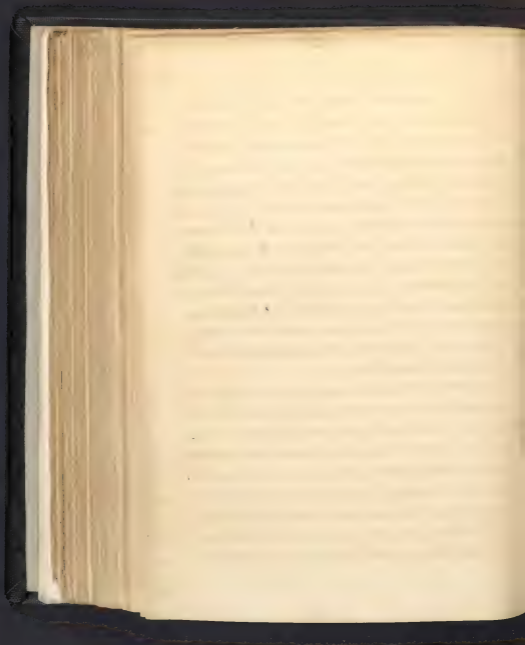
In further confirmation of the utility of
this medicine in the cure of Hemoptysis, I
beg leave to relate the particulars of the
following case, which came under my
observation last Spring on the 15th of May
I was called on to visit Thomas Ray, aged
twenty five years, he followed the trade of
a shoemaker, and had been subject to fre-
-quently attacks of this disease. He
had on former occasions been successfully
treated by Dr Thomas L Davis of Chester
County Pa but that physician having
himself become indisposed, referred
this patient to me. Several days having
elapsed before I saw him, in consequence
of the patient's anxious desire to be attended
by his former physician. Upon seeing
him, I was almost deterred making
any effort to relieve him, so desperate
did the case appear. I was informed
by his friends that he ejected, he coughing
and gently forcing the air from his lungs,
at least a pint and a half of blood daily



since the 12th he had not slept for three days and nights, nor was he able to repose in a horizontal posture, he had no appetite, his strength was rapidly declining, and it was expected that he could not survive many hours.

I need not be tedious in relating the treatment. He took five grains of Sacch: sat: with the fourth of a grain of opium every six hours. When he had used half a drachm of the medicine he was enabled to lie a few hours with considerable ease, and the hemorrhage was so far restrained that the expectorated mucus was barely streaked with blood. Pectoral mixtures were now employed with a view to remove his cough, and other remedies were prescribed to restore his strength, which was accomplished in a short time.

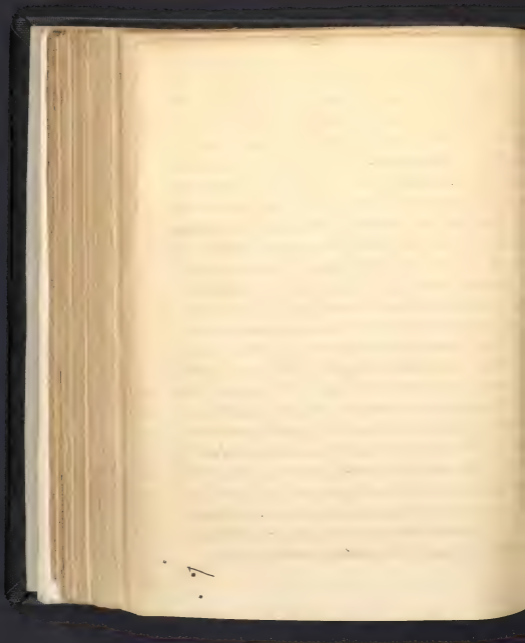
Wine is a useful medicine in many cases of hemorrhages. The celebrated Cullen however entirely rejected it in hæmoptoeis, since the experience of other physicians has been



such, as to rank it ^{high} in this disease. It may be given alone, or in combination with Kins. The nearest preparation, however, is in the form of whey, prepared by boiling two drachms of alum in a pint of milk, of this a wine glass full may be given every two or three hours, as the exigency of the case may require. While using this medicine, it will be necessary to keep the bowels gently open; for this purpose lavations are ill adapted, as they carry off with them the medicine that is employed. Glysters are therefore preferable, and in order that they may be more effectual, they should be of a Stimulating nature.

No further means in a critical case, we should resort to cold applications, to the throat, and particularly under the axillae. The chest is more susceptible than the axillae, and such applications prove very serviceable. The patient's room should also be well ventilated, and his drinks moderately cold.

To the remedies already mentioned, may be added another class, very gently,

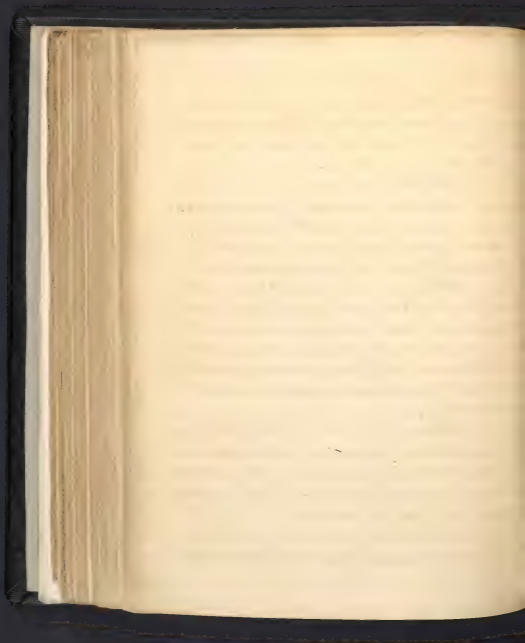


accredited by no small proportion of practitioners.
It is the narcotics to which I allude. The
practice of using them on this occasion origi-
nated in Germany. The principle which
first dictated their use, was to quiet irritation.
No striking advantage, is obtained, from either
the Henbane or Scopolamine. But opium pro-
~~duces~~ a great deal in these cases. What
might be the effect of a very large dose of it,
in the very commencement of haemorrhysis,
is as yet quite problematical. That it has
done good, when thus prescribed, we are
not without some direct proof. Nor is the
collateral evidence altogether to be overlooked.
It is now admitted, that one of the most effec-
tual remedies in certain cases of uterine
haemorrhages, is to put the system completely
under the impression of an opiate. But
it will be asked, is not opium a stimulant,
and can it be proper to give it, where there is
an active but disturbed circulation. To this it
may be replied, does not every surgeon, after an
operation, to quiet the patient and prevent



hemorrhage, resort to opium, though a very high degree of vascular action may prevail at the time. The fact is, it should be constantly borne in mind, that it possesses peculiar properties. Most unquestionably, opium is a stimulant. But it is also the possessor of powers, by which it is enabled to do away irritability. So that it is sometimes very useful even where the general system seems to preclude its employment. In the use of this medicine in hemorrhages, it answers best, where there is great irritation of the pulmonary organs, attended with cough. We can not dispute its propriety under such circumstances.

Digitalis has been spoken of by Dr. Ferriar of Liverpool as being of great utility in active hemorrhage, when the energy of the system has been previously reduced by venisection, but still continues so great as to require further depletion, which from the state of the patient could not be effected by blood letting, then the *digitalis* may be given with

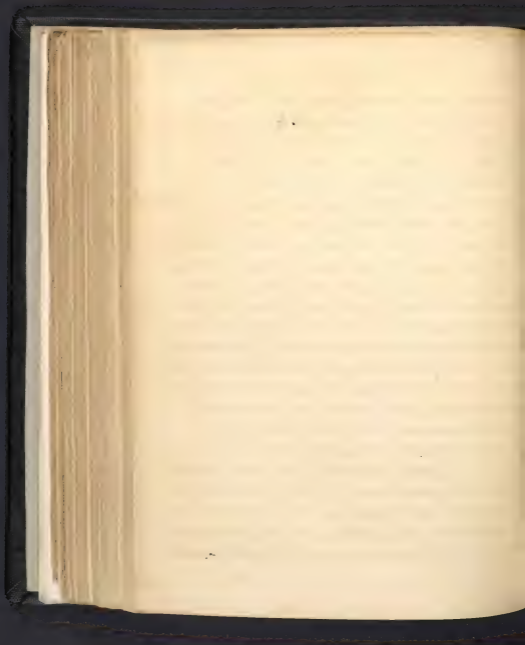


advantage. But should not be given in the disease under consideration, before venesection has been frequently premised, at the same time it is necessary to apply blisters.

Blisters, are among the most efficacious measures for treating this disease, but they are never to be used until the energy of the arterial system has been previously reduced by bloodletting, and the antiphlogistic regimen. They are serviceable, applied to the wrists, back of the neck and chest, of which the last is the best, but they here should evacuate plentifully, for it is principally with this view they are used. They should therefore be kept open by stimulating applications.

Issues, have a remarkable effect in preventing a recurrence of this disease. They should be made on the upper part of the arm near the insertion of the deltoid muscle, and on the breasts.

Emetics, in discharging offensive and irritating matter from the stomach;



and ought to be abstained from.

The next prospect to mention the remedies proper for its second, or passive state. And first of bark, which will be found a valuable remedy in this stage of the disease. Its various substitutes, as the *Cornus florida*, *Sericea*, &c. may be used there.

Wine is a very agreeable and manageable stimulant, and one that should be employed when this class of medicines is indicated, and when it does not prove unfriendly, to the stomach.

Porter is highly entitled to our notice, as being a liquid which the stomach retains when all others are offensive to it. Of this, we have a convincing proof, in the case of Dr. Smith of Princeton College, mentioned by the late Dr. Rush. He made it his sole drink for several months, without receiving from it the slightest inconvenience.



Acids may be administered with a view to their astringent operation, in combination with some of the remedies above mentioned; here the mineral acids appear preferable, the best however is the Sulphuric.

Much benefit will be derived from a light and cordial diet. The patient here, as in convalescence from other long states of debility, should eat a small quantity at a time, and his meals be often repeated, that an equal excitement may be preserved in the stomach, and the system not suffer from the alternate plenitude and inanition of that viscera.

the first of the month of January 1841
I left the residence of my father
and went to the residence of my mother
at the village of St. John's
in the county of York
I remained there until the 1st of February
when I returned to the residence of my father
at the village of St. John's
in the county of York
I remained there until the 1st of March
when I returned to the residence of my father
at the village of St. John's
in the county of York
I remained there until the 1st of April
when I returned to the residence of my father
at the village of St. John's
in the county of York
I remained there until the 1st of May
when I returned to the residence of my father
at the village of St. John's
in the county of York
I remained there until the 1st of June
when I returned to the residence of my father
at the village of St. John's
in the county of York
I remained there until the 1st of July
when I returned to the residence of my father
at the village of St. John's
in the county of York
I remained there until the 1st of August
when I returned to the residence of my father
at the village of St. John's
in the county of York
I remained there until the 1st of September
when I returned to the residence of my father
at the village of St. John's
in the county of York
I remained there until the 1st of October
when I returned to the residence of my father
at the village of St. John's
in the county of York
I remained there until the 1st of November
when I returned to the residence of my father
at the village of St. John's
in the county of York
I remained there until the 1st of December
when I returned to the residence of my father
at the village of St. John's
in the county of York
I remained there until the 1st of January 1842
when I returned to the residence of my father
at the village of St. John's
in the county of York

